

CLAIM AMENDMENTS

IN THE CLAIMS

This listing of the claims will replace all prior versions, and listing, of claims in the application or previous response to office action:

1. **(Currently Amended)** A method for recognizing a sensor type, the method performed by a program embodied in tangible computer-readable media and comprising the following steps:

checking a first condition that will have been met if a measuring signal of a sensor exceeds a first threshold,

checking a second condition if the first condition has been met, with the second condition having been met if a gradient of the measuring signal is greater in amount than a predefined second threshold,

determining whether the sensor is (a) a signal-value-range multiplex output type sensor having at least two different outputs that are multiplexed, or (b) not a signal-value-range multiplex output type sensor having at least two different outputs that are multiplexed, including:

recognizing the sensor as a signal-value-range multiplex output type sensor if the first and second conditions have been met, ~~then a sensor having a signal-value-range multiplex output for the measuring signal will be recognized~~, and

recognizing the sensor as not a signal-value-range multiplex output type sensor if at least one of the conditions has not been met.

2. **(Previously Presented)** The method according to claim 1, wherein the first and second conditions are in each case checked close in time to a start of operation of the sensor.

3. (Previously Presented) The method according to claim 1, wherein the sensor having the signal-value-range multiplex output for the measuring signal will be recognized if the first and second conditions have been met a predefined number of times, and otherwise the sensor not having a signal-value-range multiplex output for the measuring signal will be recognized.

4. (Previously Presented) The method according to claim 1, wherein the following steps are carried out in case of a recognized sensor having a signal-value-range multiplex output:

the first and, dependent thereon, the second conditions are checked,

a measurement value of the measuring signal, which value was registered a predefinable period of time before the first and second condition were met, will be assigned to either a first or a second measured variable depending on the sign of the gradient of the measuring signal or depending on the measurement value's absolute value.

5. (Previously Presented) The method according to claim 4, wherein a fault will be recognized if the first and second conditions are not met during a predefinable period of time.

6. (Previously Presented) A method for determining whether or not a sensor is a signal-value-range multiplex output type sensor having at least two different outputs that are multiplexed, the method performed by a program embodied in tangible computer-readable media and comprising:

determining whether a measuring signal of a sensor exceeds a first threshold and if so, determining whether a gradient of the measuring signal is greater in amount than a predefined second threshold, and if so, identifying the sensor as a signal-value-range multiplex output type sensor,

and if either step of determining fails, then identifying the sensor as not being a signal-value-range multiplex output type sensor.

7. (Previously Presented) The method according to claim 6, wherein the steps of determining are in each case checked close in time to a start of operation of the sensor.

8. (Previously Presented) The method according to claim 6, wherein the sensor having the signal-value-range multiplex output for the measuring signal will be recognized if the steps of determining have been met a predefined number of times, and otherwise the sensor not having a signal-value-range multiplex output for the measuring signal will be recognized.

9. (Previously Presented) The method according to claim 6, wherein the following steps are carried out in the case of a recognized sensor having a signal-value-range multiplex output:

repeating the steps of determining,

assigning a measurement value of the measuring signal, which value was registered a predefinable period of time before the steps of determining were met, to either a first or a second measured variable depending on the sign of the gradient of the measuring signal or depending on the measurement value's absolute value.

10. (Previously Presented) The method according to claim 9, wherein a fault will be recognized if the steps of determining are not met during a predefinable period of time.

11. (Previously Presented) An arrangement for recognizing whether or not a sensor is a signal-value-range multiplex output type sensor having at least two different outputs that are multiplexed, comprising:

means for determining whether a measuring signal of a sensor exceeds a first threshold
and

means for determining whether a gradient of the measuring signal is greater in amount than a predefined second threshold,

wherein the sensor is recognized as a signal-value-range multiplex output type sensor if both determinations are met, and if either determination fails, then the sensor is not recognized as a signal-value-range multiplex output type sensor.

12. (Previously Presented) The arrangement according to claim 11, wherein the determinations are performed close in time to a start of operation of the sensor.

13. (Previously Presented) The arrangement according to claim 11, wherein the sensor having the signal-value-range multiplex output for the measuring signal will be recognized if the determinations have been met a predefined number of times, and otherwise the sensor not having the signal-value-range multiplex output for the measuring signal will be recognized.

14. (Previously Presented) The arrangement according to claim 11, wherein in the case of a recognized sensor having the signal-value-range multiplex output a measurement value of the measuring signal, which value was registered a predefinable period of time before the determinations were met, is assigned to either a first or a second measured variable depending on the sign of the gradient of the measuring signal or depending on the measurement value's absolute value.

15. (Previously Presented) The arrangement according to claim 14, wherein a fault will be recognized if the determinations are not met during a predefinable period of time.